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UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
WASHINGTON 25, D. C.

Cap 3

FIELD MEMORANDUM SCS-1100

Re: Procedure for developing  
group facilities.

April 26, 1944

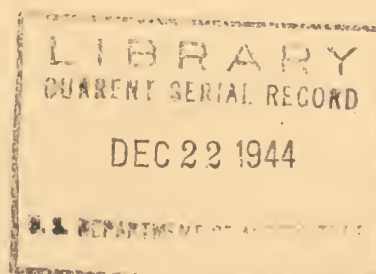
TO ALL RANKING FIELD OFFICERS:

The application of individual farm plans generally provide a satisfactory approach to the conservation problems in soil conservation districts. However, there are many instances where group or the joint action of groups of land owners and operators is necessary before the required control measures can be established effectively. For example, group action is often necessary in connection with drainage, irrigation, protection of land against flood damage and siltation and watershed erosion control measures.

The Service is confronted with an increasing number of requests for assistance with this type of work during the last two years and indications are that such requests will continue to increase as new districts are organized.

Experience indicates the need for a common Service pattern for planning and reporting group facility work. Accordingly, the attached material "Procedure for Developing Group Facilities" has been prepared by representatives of the Washington and regional offices. It is believed that any region can adjust its procedures to fit the fundamental steps outlined. It will be the policy of the Service to adhere in principle to this procedure, thereby providing methods for maintaining the required technical standards and furnishing information necessary for administrative action and reports.

*J. C. Sykes*  
Acting Chief





## PROCEDURE FOR DEVELOPING GROUP FACILITIES

In making assistance available to soil conservation districts the Service has been considering the following two major divisions:

- A. Assistance to district for helping individual farmers and ranchers prepare and apply soil and water conservation plans on their farms and ranches.
- B. Assistance to district for helping prepare and apply conservation plans for jobs requiring the cooperation of two or more owners and operators.

The techniques of farm planning and the general make-up of a farm conservation plan are well known by all Service technicians. This knowledge has been gained through various field memoranda and experience in farm planning and application. However, there is no general uniformity throughout the Service regarding techniques and procedures necessary in providing assistance on group problems.

A successful soil and water conservation program in many areas is dependent upon the solution of group problems, such as the construction, repair, or improvement of irrigation and drainage systems, flood control structures, erosion control works, and other similar jobs. The increased demand for Service assistance in this type of work makes it desirable to adopt a procedure for developing group facilities in order that (1) adequate technical standards may be maintained, and (2) sufficient information supplied for administrative action.

The term "group facility" is defined as any job involving two or more land owners or operators who agree to work together to carry on the construction, operation, and maintenance required. (The terms "group facility" and "job" are used interchangeably in this memorandum.)

The complexity of a job, the number of jobs to be undertaken, the number and location of personnel qualified to analyze the inherent factors and develop plans, and the kinds and amounts of assistance requested from the Service are some of the factors which must be considered in setting up a procedure for developing group facilities. The following procedural steps are believed essential for the more complex jobs where assistance from the Service is requested.

1. Request for making an investigation of a proposed group facility.
2. Preparation of preliminary report as a basis for determining feasibility of job and farmer interest. (This may require a reconnaissance survey.)
3. Preparation of plan of operations and assistance to groups and districts in preparing agreements. (This may require detailed engineering, conservation, and other surveys.)
4. Completion report.

The region should make modifications for the less complex jobs.

In dealing with district governing bodies the district conservationist is recognized as the responsible Service official in initiating and carrying through the



progressive steps set out below. Due to the complexity of technical problems encountered on many jobs and the amount or kind of Service assistance required, the district conservationist may not have available all the facilities necessary to assist the district and the group in the solution of the problem. Consequently, step 1 is considered necessary in such cases in order that the state and regional offices may be appraised of the problem and may have a basis for determining whether to furnish needed assistance for obtaining additional information; step 2 will provide sufficient information for decision as to the advisability of furnishing further assistance in planning and carrying out a particular job. On less complex jobs each region will determine to what extent the decision to furnish assistance to a district for planning and carrying out a job may be made by the district conservationist or the state conservationist. Each region will determine to what extent step 1 may be eliminated for less complex jobs. For jobs requiring Washington approval, the documents prepared under steps 2 and 3 will be submitted to the Chief of Operations at Washington. (See Manual, paragraph 46026, for classes of jobs requiring Washington approval.)

Copies of all documents, prepared in accordance with this procedure or the procedure as modified by the region, will be maintained by the work unit involved and the district conservationist. The state conservationist and the regional chief of operations should retain whatever information they determine is needed.

The Washington office needs information to illustrate the nature of group facility undertakings, the benefits derived from such work, the relationship of this work to the National Soil and Water Conservation Program, and the distribution of cost. This information is needed in evaluating comprehensively the need for funds for this type of work and in making equitable distribution of available resources. The Washington office should, therefore, be supplied with the following information:

1. For all group facility work
  - a. the number of jobs planned, number of farmers benefited, approximate acreage benefited;
  - b. the number of jobs completed, number of farmers benefited, and approximate acreage benefited; and
  - c. the total cost of planned jobs and the total cost contributed by the Service. (See discussion under the heading "In-Service Accomplishment Reports on all Group Facility Work.")
2. For the more complex jobs not requiring Washington approval, as determined by each region
  - a. one copy of the plan of operations covered in step 3;
  - b. one copy of the completion report, step 4.

This information should be submitted for a sufficient number of jobs in each state to represent an adequate cross section of this type of work needed within the state.

STEP 1--Request for making an investigation of a proposed group facility.

The following outline gives the type of information that should be submitted to enable a decision to be made as to the advisability of preparing a preliminary report when Service assistance has been requested by the district.

1. Give the name and location of the proposed job and indicate the type of organization that will own and operate it. Show the extent of the group and district governing body interest in the facility.
2. State the type of job and give a brief description of what is involved in its construction. Show what the job will accomplish and why it is proposed.
3. Show the area directly benefited and the number of farms or operating units benefited. Make a general statement as to the types of crops grown in the area under consideration and expected increases in agricultural production.
4. Indicate the availability of needed technical and other services.

The district conservationist will submit to the state conservationist a request from the district governing body for assistance from the Service for making an investigation of the proposed facility. The district conservationist will indicate the technical assistance, if any, needed, but not available in the work group, for making the investigation. The state conservationist will forward the request to the regional chief of operations with his recommendations and a statement of the technical assistance, if any, that will be required from the regional office to make the investigation and prepare the preliminary report.

#### STEP 2--Preliminary Report.

Upon decision to proceed with the investigation, the district conservationist will inform the district governing body and arrange for the needed Soil Conservation Service assistance in the preparation of the preliminary report. On many jobs a reconnaissance survey will be required to secure the necessary information for preparing this report. The reconnaissance survey and the preliminary report should be made or approved by a qualified engineer or the zone technician. The preliminary report should provide information essential in determining (a) engineering feasibility of the job, (b) economic feasibility, (c) extent of group participation, (d) approximate amount of Service assistance necessary to complete the job in a satisfactory manner.

Where extensive engineering or other surveys will be required for the preparation of plans for the facility, a survey outline should be prepared as a guide for conducting the required surveys and other investigations. The survey outline should be attached to the preliminary report for review by appropriate regional division chiefs and the approval of the regional chief of operations.

The preliminary report should be discussed with the district governing body and the farmer group emphasizing the contributions to be made by the farmers, the district, and by other sources, such as the county, railroad companies, the state, etc. If this discussion is favorable and the district and the group desire to proceed, the district conservationist will submit the preliminary report for Service approval on the same basis as the request for making investigations. Where contributions from sources other than the farmers and the districts are anticipated, the district governing body should find out if such contributions can be expected before Soil Conservation Service assistance is used in making detailed surveys and in the preparation of the plan of operations.



STEP 3--Preparation of Plan of Operations and Assistance to Districts and Groups in Preparing Agreements.

Acting upon favorable information in the preliminary report or upon approval of the preliminary report, when such approval is required by the region, the district conservationist will arrange for any further conservation, engineering, and other surveys needed and the preparation of a plan of operations. Before the plan is recommended to the district governing body or farmer group for adoption, the technical data and specifications should be approved by the regional chief of operations and the state water engineer, or other appropriate state official, as required by state law.

Upon approval of the technical data and specifications the district conservationist will present the plan of operations to the district governing body and the farmer group for consideration. If the district governing body intends to use assistance made available by the Soil Conservation Service in helping the group of farmers concerned carry out the plan, the district shall enter into a working agreement with the group covering the plan. The form of agreement must be satisfactory to the Service. (See Manual paragraph 49260 for suggested form.)

When the form of agreement used by the district departs substantially from the suggested form, it should be submitted either separately or with the plan of operations for approval by the regional chief of operations before Service assistance is used by the district in carrying out the plan.

The district conservationist should recommend to the district governing body that it ascertain that rights-of-way agreements or easements, certificates of water rights, and articles of association or incorporation of the farmer group, if any, are in proper form before the district commits itself to assist the group in carrying out the plan. The district governing body should be encouraged to obtain the advice of appropriate attorneys and the state soil conservation committee with respect to the adequacy of those documents. The district conservationist should also recommend to the district governing body that the district maintain a permanent file of all of these documents together with plans of operations showing approval of state engineer, working agreements, completion reports, and other pertinent information.

Engineering Data

The engineering data, such as the following, used in developing the plan of operations, should be made available to the work unit office concerned and two copies to the regional office with the plan of operations:

1. A description of any special surveys or investigations carried out in connection with the planning of the group facility, such as water supply, hydrologic or foundation investigations, ground water studies, etc., together with a report of the findings.
2. A statement of the basis for the design of the facility or of the major integral parts of the facility, such as canals, spillways, ditches, other major structures, etc.



3. Copies of the calculations for any designs to be checked in detail in the regional or Washington office.

#### Construction Progress Report

On jobs requiring considerable time for completion of construction, a progress report may be desirable at intervals for administrative use. The progress report, as required by the region, will be prepared by the engineer supervising construction for the information of the district conservationist, state conservationist, and regional chief of operations.

#### STEP 4 - Completion Report.

Upon completion of the construction of the facility, a completion report will be prepared by the engineer supervising the construction, using the cost distribution sheet, striking out the word "estimate" in the heading. For reporting purposes use practices and units of measure included in the "Descriptive Catalogue of Conservation Practices" with appropriate sub-items. A short narrative report should be appended, describing any changes in or supplements to the plans or the specifications contained in the plan of operations.

#### In-Service Accomplishment Reports on All Group Facility Work

The attached forms "Construction Progress Report", Cost Distribution Sheet", and "Partial Payment Register, Sheets 1 and 2", are suggested for regional use. The Washington office in cooperation with regional offices will develop a standard report form for reporting group facilities to Washington, including irrigation and drainage systems, flood control structures, erosion control works, and other group jobs. Since information on group facility jobs is not available in Washington, data should be submitted on all jobs planned and all jobs completed in soil conservation districts from the beginning of district operations through December 31, 1944. Thereafter, a report on group facilities for all jobs within each district should be submitted by districts to Washington on a calendar year basis.

Soil conservation district governing bodies should be encouraged to include information in their annual reports on group facility accomplishments.

#### Attachments

- a. Suggested outline for preliminary report.
- b. Sample survey outline.
- c. Suggested outline for plan of operations.
- d. Standard forms for:
  1. Construction progress report.
  2. Cost distribution sheet - completion report.
  3. Partial payment register.



### Suggested Outline for Preliminary Report

1. Name and location of job; state, county, soil conservation district, watershed, if pertinent.
2. Description of problems and proposed facility.
3. Statement on local interest in the facility and group willingness and ability to undertake construction.
4. Area of land involved.
  - (a) Total area in farms benefited
  - (b) Total area directly benefited by facility
  - (c) Number of operating units directly benefited
5. Name and type of organization to construct and operate facility (voluntary group, association, legal enterprise).
6. Pertinent technical considerations such as water supply, water rights, soils, precipitation, stream flow, foundation conditions, rights-of-way, etc. Availability of land or water to fully utilize the facility.
7. Benefits to be derived from operation of the facility.
  - (a) Estimated increase in agricultural production
  - (b) Decreased operating or maintenance costs
  - (c) Other justification for facility such as saving of farmers' time and labor, benefits or hazards accruing to other interests, etc. (Use supporting statistical data where available.)
8. Preliminary cost estimate.
  - (a) Soil Conservation Service cost
  - (b) Soil conservation district cost
  - (c) Cost to group
  - (d) Cost to others
  - (e) Total direct cost (a, b, c, and d)
9. Estimate of technical services required in man days of professional and subprofessional personnel for planning and construction.
10. Statement of availability of technical services in the work group.
11. Estimate of other requirements.
  - (a) Labor, kind and availability
  - (b) Materials, kind and availability
  - (c) Equipment, kind and availability

2--(Suggested outline for preliminary reports)

12. Time requirements.

- (a) Time to complete surveys and develop plan of operation
- (b) Time to complete job after construction started
- (c) Time and length of construction season
- (d) Date facility will be required

13. Farm plans.

- (a) Number of farms involved which have farm conservation plans
- (b) Number of farms for which it is anticipated farm plans will be prepared.



## Sample Survey Outline

(For irrigation where inadequate drainage was known to be the problem.)

### I. Maps of area requiring drainage

#### A. Land use and ownership--4" = 1 mile

1. Ownership--(From county assessor)
2. Land use--Conservation survey

#### B. Topographic and work map--Scale 1" = 200 feet

1. Surface contours, 5' interval. (U.S.B.R. Maps)
2. Water table contours, 1' interval. (Geological survey to be made.)
3. Irrigation and drainage system layout. (From irrigation company maps.)

### II. Hydrologic data

#### A. Size of area requiring drainage. Work map supplemented by field surveys.

#### B. Water sources in wet area.

1. Applied irrigation water
  - a. crop acreage
  - b. soils
  - c. irrigation practice
  - d. irrigation efficiency
2. Irrigation canal losses  
Field investigation with current meter measurements in canal at loss areas.
3. Precipitation  
Determine surface yield and percentage to underground water. (U.S.W.B. records and U.S.G.S. records on dawn station.)
4. Other possible sources  
From geological report.

### III. Geological survey

- A. Detailed structure of area
- B. Water table contour map
- C. Analysis of possible sources of ground water from area outside of irrigation district

2--(Sample Survey Outline)

IV. Drainage system layout

A. Present system

1. Effectiveness
2. Plans and specifications, and costs for rehabilitation and extension

B. New system

1. Plans and specifications and costs

V. Maintenance program

A. Annual and periodic requirements

B. Total and acre cost.

VI. Recommendations for land and water use to reduce drainage problem

(Sample copy--each outline should be made up to fit the particular problems under consideration.)

## Suggested Outline for Plan of Operation

1. Location of job
2. Brief description of work to be done
3. Rights-of-way
  - a. Statement concerning rights-of-way needed for the job and provisions made to secure them. (Include when rights-of-way agreements have not been secured.)
4. Water rights
  - a. Statement indicating whether the job is affected by considerations of water rights and in what way.
5. Construction schedule
  - a. Include the schedule to be followed in carrying out the items of work specified in the construction plans and cost estimate sheet.
6. Allocation of construction and maintenance costs
  - a. Indicate the allocation of such costs among members of the farmer group and the basis upon which this allocation was determined.
7. Cost estimate sheet (Use the "Cost Distribution Sheet" form, blocking out "(final)" in the heading.)
  - a. Items. List each item of construction and show a breakdown into labor, materials, and equipment. As one item, show the total technical services cost for surveys, plans, and construction by field personnel.
  - b. Cost division. Under "Cost division" heading show Soil Conservation Service costs, soil conservation district cost, and cost to be borne by group or others.
8. Maintenance program
  - a. Set up an annual maintenance schedule and specify the maintenance practices to be followed.
  - b. Make provision for carrying on the required maintenance operations, such as the designation of an individual responsible for maintenance or establish a date for a periodic meeting or inspection by representatives of the farmer group, the district governing body and the district conservationist for joint consideration of maintenance problems.

## 2--(Suggested Outline for Plan of Operations)

- c. Provision for a maintenance tax, levy, or voluntary contributions, if needed.

### 10. Construction plans

- a. To include all designs and engineering plans pertaining directly to the group job. Use standard BPR - profile tracing paper sheets, 22 x 34 inches, wherever possible for canal, ditch, stream, and similar jobs. Use standard drawing size sheets for other designs, details, and plans.

### 11. Construction specifications

- a. General provisions
- b. Detailed specifications for each construction item.



# CONSTRUCTION PROGRESS REPORT

Job Name \_\_\_\_\_ Period covered \_\_\_\_\_ to \_\_\_\_\_ 194\_\_\_\_\_

Job Location \_\_\_\_\_ Work Unit \_\_\_\_\_ State \_\_\_\_\_

[illegible]

## BRIEF NARRATIVE

Description of operations during period:

Plans for operations during next period: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Submitted by: \_\_\_\_\_  
 \_\_\_\_\_ Engineer \_\_\_\_\_ District Conservationist

Date \_\_\_\_\_

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Job Name \_\_\_\_\_

Prepared by \_\_\_\_\_  
Engineer

Approved by \_\_\_\_\_  
Engineer

## Work Unit

Date \_\_\_\_\_

[illegible]

\*Value of contributions made by state or other agencies, corporations or individuals.

Estimate of . . . . . 194 . . . . . Check No. . . . .

(4)

(To be attached to each copy of Payment Voucher)

[illegible]

Total Value of Work Done to Date